

PROJECT DESCRIPTION

I. GENERAL

This project involves the installation of a Firehouse Signal at the intersection of MD 2 / 4 and the Prince Frederick Volunteer Rescue Squad in Calvert County. MD 2 / 4 is assumed to run in a north-south direction.

II. INTERSECTION OPERATION

- The intersection is to operate in a NEMA two-phase, pushbutton-actuated mode, with the MD 2 / 4 approaches running concurrently during the Flashing Operation phase. The Flashing Operation phase shall run continuously until pushbutton actuation. Once actuation occurs, the mainline will go to a solid yellow and then red, the Firehouse Pre-emption phase shall display yellow for the firehouse driveway.
- A full-traffic-actuated, eight-phase controller with all necessary equipment housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.

III. SPECIAL NOTES

- The Contractor shall be responsible for terminating all signal cables, excluding interconnect, to the appropriate terminals and shall properly label each cable.
- All controller cabinet wiring will be performed by the S.H.A. Signal Shop. Contact Mr. Ed Rodenhizer (Dave Swartz) at (410) 787-7650 seventy-two hours in advance of intended work.
- All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.
- Upon completion of this project, the Contractor shall notify Mr. Robert Snyder at (410) 787-7631 to arrange for the phone line installation. The Contractor is to provide Mr. Robert Snyder with the nearest street address, zip code and phone number.

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY S.H.A.

ITEM NO.	DESCRIPTION	QUANTITY
9081	NEMA size "6" base-mounted cabinet with controller, 2-circuit flasher unit, intersection monitor for telephone drop & asso. harnesses	1 EA
9089	Sheet aluminum signs to consist of: S11-8(1) "FIREHOUSE SIGNAL" sign (72" x 36") mast arm mounted	36 SF 2 EA

EQUIPMENT LIST (CONT.)

A. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

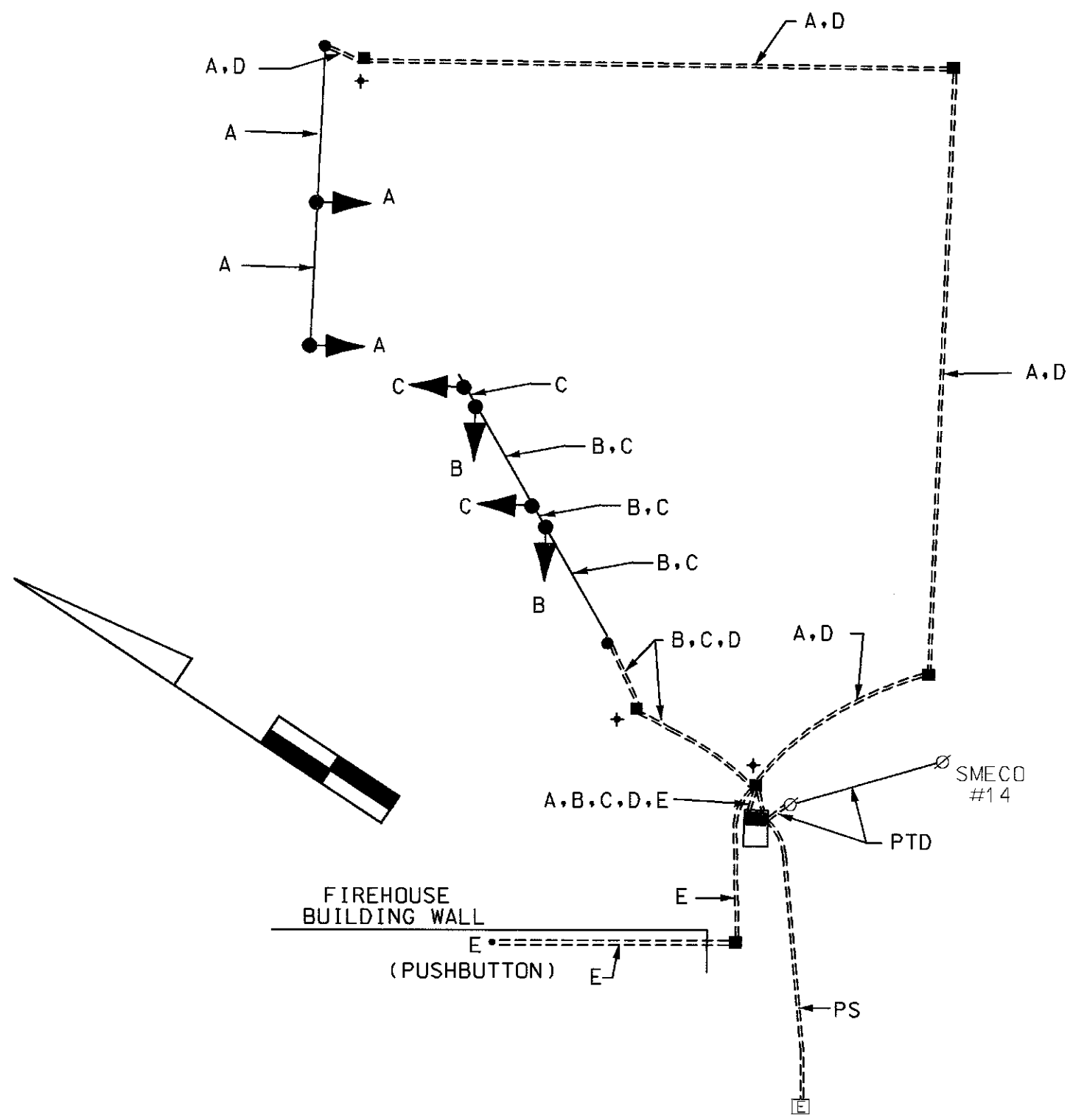
ITEM NO.	DESCRIPTION	QUANTITY
1001	Maintenance of traffic per assignment.	2 EA
2002	Test Pit Excavation	3 C.Y.
5005	24" white heat applied permanent preformed thermoplastic pavement marking.	85 L.F.
8011	Furnish and install 12" vehicular traffic signal head section	12 EA
8019	Furnish and install 8" vehicular traffic signal head section.	6 EA
8020	Furnish and install control and distribution equipment (120/240 V, 1 phase 3 wire system).	1 EA
8023	Furnish and install 27' mast arm pole and 60' mast arm.	1 EA
8024	Furnish and install 27' mast arm pole and 70' mast arm.	1 EA
8051	Furnish and install 3" schedule 80 rigid polyvinyl chloride conduit - trenching	440 L.F.
8052	Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - bored.	140 L.F.
8053	Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - trenching.	20 L.F.
8057	Furnish and install concrete for signal foundation.	12 C.Y.
8060	Furnish and install No. 6 AWG stranded bare copper ground wire.	440 L.F.
8072	Furnish and install electrical handhole.	6 EA
8075	Install overhead sign.	36 S.F.
8080	Furnish and install ground rod - 3/4" x 10'.	4 EA
8082	Furnish and install electrical cable - 2 conductor (No. 14 AWG).	205 L.F.
8084	Furnish and install electrical cable - 5 conductor (No. 14 AWG).	850 L.F.
8091	Furnish and install 2" schedule 80 rigid polyvinyl chloride - trenching	15 L.F.
8093	Install controller and cabinet base mount.	1 EA
NEG	Furnish and install pushbutton and all necessary equipment within firehouse.	1 EA

PHASING CHART

1	2	3	4	5	6	
(R)	(R)	(R)	(R)	(R)	(R)	12"
(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	12"
(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	8"

NORMAL OPERATION	FL/ 8"Y	FL/ 8"Y	FL/ 8"Y	FL/ 8"Y	FL/R	FL/R	←
PRE-EMPTION WARNING	OFL/ 8"Y	OFL/ 8"Y	OFL/ 8"Y	OFL/ 8"Y	R	R	→
WARNING CHANGE	Y	Y	Y	Y	R	R	↑
PRE-EMPT PHASE	R	R	R	R	FL/ 8"Y	FL/ 8"Y	↓
PRE-EMPT CHANGE	R	R	R	R	Y	Y	←
FLASHING OPERATION	FL/ 12"Y	FL/ 12"Y	FL/ 12"Y	FL/ 12"Y	FL/R	FL/R	→

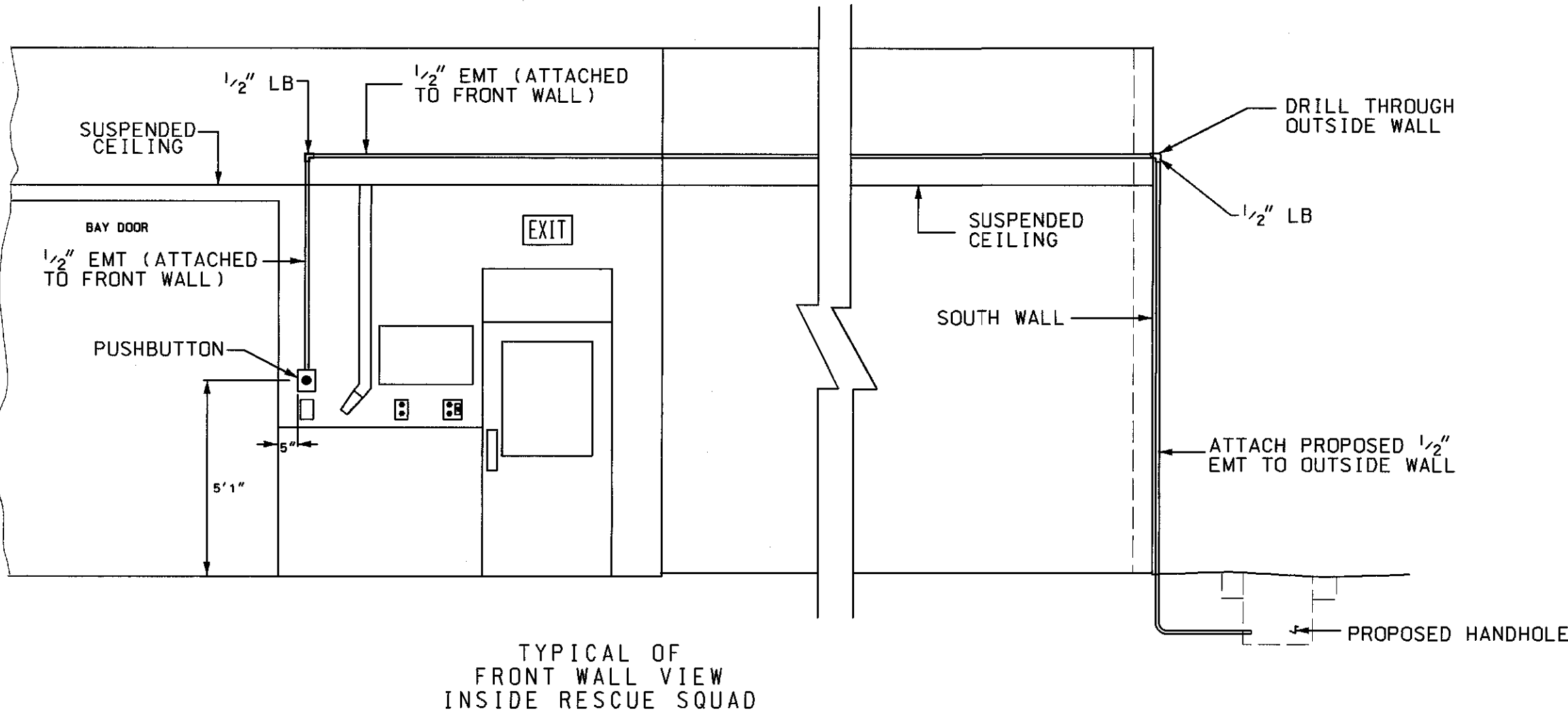
WIRING DIAGRAM



WIRING KEY

- A } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- B } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- D - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- E - 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- PS - PROPOSED UNDERGROUND SERVICE TO BE INSTALLED BY SMECO
- PTD - PROPOSED TELEPHONE DROP TO BE INSTALLED BY VERIZON
- + - GROUND ROD

PUSHBUTTON INSTALLATION



STREET TRAFFIC STUDIES, LTD.  
400 Crain Hwy. NW,  
Glen Burnie, MD 21061  
Ph (410) 590-5500  
Fax (410) 590-6637



MARYLAND DOT - STATE HIGHWAY ADMINISTRATION  
Office of Traffic & Safety  
TRAFFIC ENGINEERING DESIGN DIVISION  
MD 2 / 4 AND PRINCE FREDERICK  
VOLUNTEER RESCUE SQUAD

DRAWN BY: ROB CICHINI	F.A.P. NO. AC-STPG-0005(788)E	TS. NO. 4144	SHEET NO. 2 OF 2
CHECKED BY: R. R. ZACHERL	S.H.A. NO. C438452/B52	T.I.M.S. NO. E868	
SCALE: NONE	COUNTY: CALVERT		
DATE: 4-26-02	LOG MILE: 04002019.44		